

Micro-sized Video System to Measure Performance of Aircraft-Fired Munitions

Company:

Xybion Electronic
Systems Corp

Location:

San Diego, CA

Employees:

30

President:

Dennis Caudle

Project Officer:

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SBIR Technology

The Air Force required a miniaturized, rugged "on board" imager that could capture images of aircraft-fired munitions on command, asynchronously, and transmit the real-time data to a ground station. The smaller size of modern munitions and the increased use of standoff-firing warheads means that ground-based tracking cameras cannot adequately provide the critical position and attitude data needed to evaluate the flight performance and effectiveness of these weapons.

Xybion Electronic Systems Corporation used SBIR contracts to develop a Micro Reconnaissance Puck (MRP) system. The MRP features a battery-operated camera, lens, and radio frequency (RF) downlink system that is capable of determining precise target location and target dimension measurements yet is highly miniaturized and rugged enough to be shot out of a gun. The original MRP design has been flown on remotely piloted vehicles (RPV), light aircraft and smart-weapon flight bodies with outstanding results, including high-resolution video images.

**For more information
on this story, contact
Air Force TechConnect
at 1-800-203-6451 or
at [www.afrl.af.mil/
techconn/index.htm](http://www.afrl.af.mil/techconn/index.htm)**

Company Impact

With the success of Xybion's SBIR work, the MRP system has now been adopted by three U.S. Air Force programs. It is also being used by the U.S. Navy for the Forward Air Support Strike Missile (FASM) and by the U.S. Army for "QuickLook" (an artillery launched targeting and BDA RVP). Derivative technology and variations of MRP are being applied to DARPA's Unattended Ground Sensor (UGS) program and several law enforcement programs and systems.

Company Quote

"The SBIR Program has already benefited existing government and industry programs. This SBIR has enabled Xybion to create new and powerful technologies that are already growing into a new line of commercial products that advance current state of the art and fosters the company's growth."

Dennis Caudle

Vice President

Xybion Electronic Systems Corporation

SBIR

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